

## **AMENDMENTS TO THE CLAIMS**

### **Listing of Claims**

A listing of the entire set of pending claims is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

1 (Canceled)

2. (Previously presented) The method of claim 10, comprising updating lamp operating parameters to suit the determined lamp type.

3. (Previously presented) The method of claim 2, wherein the lamp operating parameters are selected from the group consisting of a dimming curve, a maximum operating current, a minimum operating current, an operating frequency, and an operating current as a function of frequency for a given dimming level.

4. (Previously presented) The method of claim 10, including storing the determined lamp type.

5. (Previously presented) The method of claim 10, including comparing the determined lamp type to a stored lamp type.

6. (Original) The method of claim 5 wherein the stored lamp type is selected from the group consisting of a preceding determined lamp type and a weighted average of previously determined lamp types.

7. (Original) The method of claim 5 further comprising re-checking the determined lamp type if the determined lamp type is different than the stored lamp type.

8 (Canceled)

9. (Previously presented) The method of claim 10, wherein the measuring of the first filament current after the lamp filament has been heated and before the predetermined time comprises measuring the first filament current at about one half the predetermined time.

10. (Previously presented) A method for lamp type determination for an electronic ballast comprising:

- heating a lamp filament by applying a voltage at a first frequency to the lamp filament for a predetermined time;

- measuring a first filament current after the lamp filament has been heated and before the predetermined time;

- measuring a second filament current at the predetermined time; and

- determining a lamp type by:

  - calculating a slope of a line connecting the first filament current and the second filament current as a function of time; and

  - comparing the slope and the second filament current to slope and current values indexed by lamp type.

11 (Canceled)

12. (Previously presented) The method of claim 10, wherein the determining of the lamp type includes comparing the first filament current and the second filament current to current values at different frequencies indexed by lamp type.

13. (Previously presented) The method of claim 10, including providing an indication if the determined lamp type is not correct for the electronic ballast.

14. (Previously presented) The method of claim 10, wherein the measuring of the filament characteristics of the heated filament includes at least one of: measuring lamp filament current, measuring lamp filament resistance, and measuring lamp filament voltage.

15 (Canceled)

16. (Previously presented) The system of claim 20, including means for updating lamp operating parameters to suit the determined lamp type.

17. (Previously presented) The system of claim 20, including means for storing the determined lamp type.

18. (Previously presented) The system of claim 20, including means for comparing the determined lamp type to a stored lamp type.

19. (Canceled)

20. (Previously presented) A system for lamp type determination for an electronic ballast comprising:

- means for heating a lamp filament by applying a voltage at a first frequency to the lamp filament for a predetermined time;

- means for measuring a first filament current after the lamp filament has been heated and before the predetermined time;

- means for measuring a second filament current at the predetermined time; and

- means for determining lamp type, including:

- means for calculating a slope of a line connecting the first filament current and the second filament current as a function of time; and

- means for comparing the slope and the second filament current to slope and current values indexed by lamp type.

21. (Cancelled)

22. (Previously presented) A system for lamp type determination for an electronic ballast comprising:

- means for heating a lamp filament by applying a voltage at a first frequency to the lamp filament for a first predetermined time;

- means for measuring a first filament current at the first predetermined time;

- means for applying a second voltage at a second frequency to the lamp filament for a second predetermined time;

- means for measuring a second filament current at the second predetermined time; and

- means for determining lamp type by comparing the first filament current and the second filament current to current values at different frequencies indexed by lamp type.

23. (Previously presented) The system of claim 22, including means for providing indication if the determined lamp type is not correct for the electronic ballast.

24. (Previously presented) An electronic ballast with lamp type determination, the electronic ballast providing power to a lamp filament, the electronic ballast comprising:  
a filament current sensing circuit operably connected to the lamp filament and generating a sensed filament current signal; and  
a microprocessor receiving the sensed filament current signal and operably connected to control the power to the lamp filament;  
wherein the microprocessor is programmed to:  
heat the lamp filament by applying the power at a first frequency for a predetermined time;  
measure a first filament current after the lamp filament has been heated and before the predetermined time;  
measure a second filament current at the predetermined time; and  
determine a lamp type by:  
calculating a slope of a line connecting the first filament current and the second filament current as a function of time; and  
comparing the slope and the second filament current to slope and current values indexed by lamp type.

25. (Original) The electronic ballast of claim 24 wherein the microprocessor 128 is programmed to update operating parameters for the electronic ballast to suit the determined lamp type.

26. (Original) The electronic ballast of claim 24 wherein the microprocessor 128 includes memory and is programmed to store the determined lamp type in the memory.

27-32. (Cancelled)

33. (Currently amended) An electronic ballast comprising:  
a power supply that is configured to supply a variable current to a filament of a lamp,  
one or more sensors that are configured to monitor the filament current of the lamp,  
a memory for storing one or more predefined time-dependent characteristics of each of a plurality of predefined lamp types.  
a processor that is configured to:  
determine one or more time-dependent characteristics of the filament current based on at least a first filament current at a first time and a second filament current at a second time,  
determine a type of the lamp ~~based on the one or more time-dependent characteristics of the filament current~~ by comparing the one or more time-dependent characteristics of the lamp to one or more predefined time-dependent characteristics of each of a plurality of predefined lamp types, and  
control the power supply based on the type of the lamp.

34. (Cancelled)

35. (Currently amended) The electronic ballast of claim 33 [[32]], wherein the time-dependent characteristic of the lamp is a rate of change of the filament current.

36. (New) The electronic ballast of claim of claim 33, wherein the memory is EEPROM disposed at the microprocessor.

37. (New) The electronic ballast of claim of claim 33, wherein the memory is external to the microprocessor.